ASSEMBLY, OPERATING INSTRUCTIONS AND PARTS LIST FOR CRAFTSMAN ACCRA-ARM 10 INCH RADIAL SAW

MODEL NUMBER 113.29402

The Model Number will be found on a plate attached to your saw, at the left side of the base. Always mention the Model Number in all correspondence regarding the CRAFTSMAN ACCRA-ARM RADIAL SAW or when ordering repair parts.

HOW TO ORDER REPAIR PARTS

All parts listed herein may be ordered through SEARS, ROEBUCK AND CO. or SIMPSONS-SEARS LIMITED. When ordering parts by mail from the mail order house which serves the territory in which you live, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER
2. The PART NAME
3. The MODEL NUMBER 113.29402
4. The NAME of item—RADIAL SAW

COAST TO COAST NATION-WIDE SERVICE FROM SEARS FOR YOUR CRAFTSMAN ACCRA-ARM RADIAL SAW

SEARS, ROEBUCK AND CO. and SIMPSONS-SEARS LIMITED in Canada back up your investment with quick, expert mechanical service and genuine CRAFTSMAN replacement parts.

If and when you need repairs or service, call on us to protect your investment in this fine piece of equipment.

SEARS, ROEBUCK AND CO.-U. S. A.
IN CANADA, SIMPSONS-SEARS LIMITED

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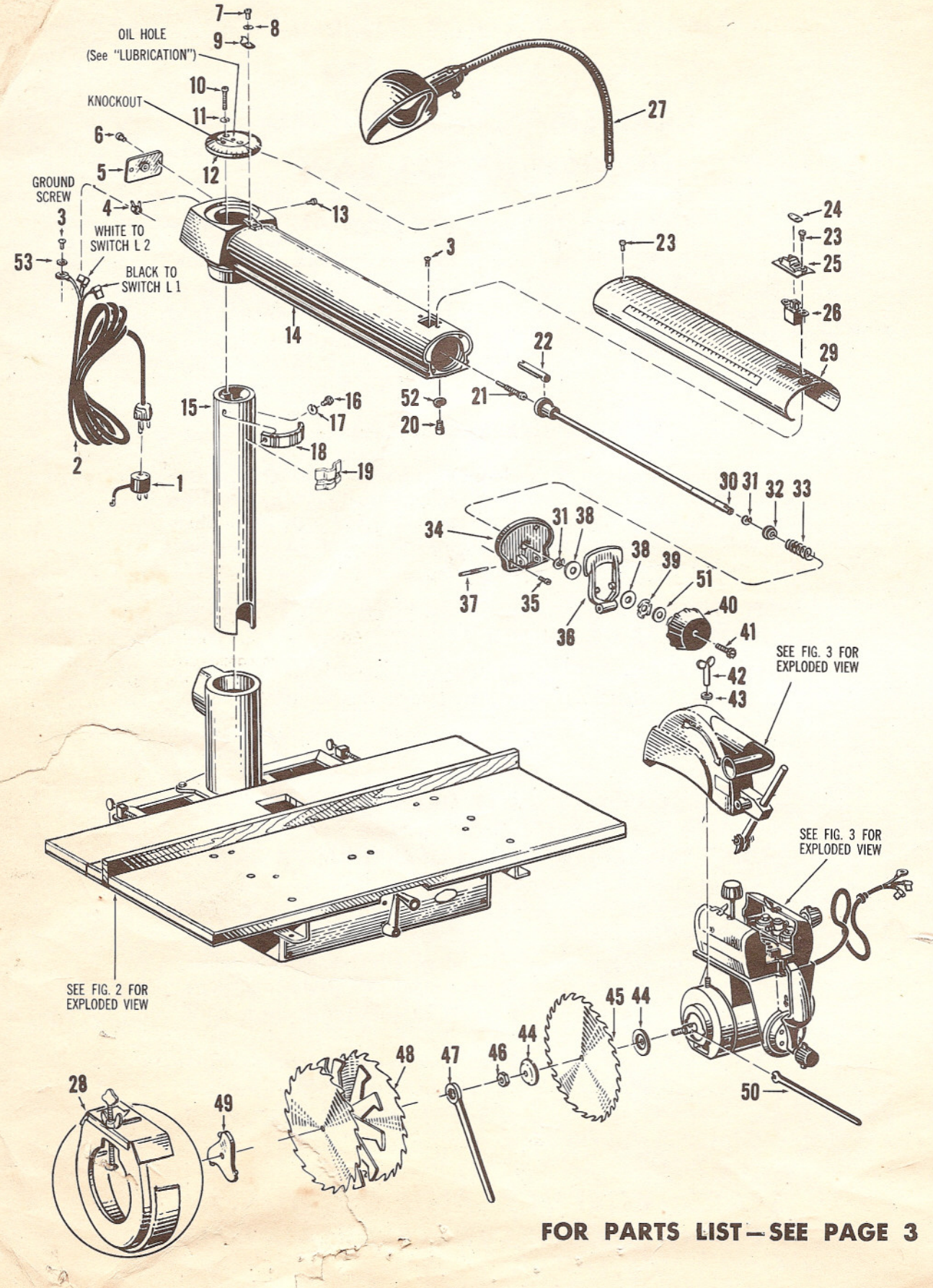


FOR PARTS LIST—SEE PAGE 3

Figure 1

CRAFTSMAN ACCRA-ARM, 10-INCH RADIAL SAW, MODEL NO. 113.29402

All parts illustrated in Figures 1 through 4 and listed under part numbers may be ordered through any Sears retail or mail order store. Order parts by mail from the mail order store which serves the territory in which you live. In several instances part numbers are listed for COMPLETE ASSEMBLIES. All parts are shipped prepaid within the limits of the continental United States.

WHEN ORDERING REPAIR PARTS ALWAYS GIVE THE FOLLOWING INFORMATION:

1. THE PART NUMBER.
2. THE PART NAME.
3. THE MODEL NUMBER 113.29402.
4. THE NAME OF ITEM—RADIAL SAW.

Do not use Ref. Numbers when ordering Repair Parts, always use Part Numbers.

FIGURE 1 PARTS LIST

Ref. No.	Part No.	Description
1	30469	Adapter Plug
2	37363	Cord with Plug
3	S-1374	*Pan Hd Screw Type 23 6-32 x 1/4
4	30472	Cord Clamp
5	30473	Cover Plate Assembly
6	S-602	*Pan Hd Mach Screw 10-32 x 3/8
7	S-1243	*Pan Hd Mach Screw 6-32 x 1/4
8	S-1385	*Fiber Washer .140 x .250 x 1/32
9	30474	Indicator #1
10	S-1336	*Fil Hd Mach Screw 1/4-28 x 1
11	S-1255	*Med Lock Washer 1/4 SAE
12	37418	Radial Arm Cap
13	S-1337	*Pan Hd Screw Type B Sheet Metal Screw #8 x 3/4
14	37364	Radial Arm
15	30671	Column Tube Assembly
16	S-1393	*Hex Hd Cap Screw 3/8-16 x 3/4
17	S-129	*Internal Shakeproof Lockwasher 1218
18	30479	Arm Latch
19	30661	Brake Shoe
20	S-1342	*Socket Hd Cap Screw 5/16-18 x 5/8
21	30662	Arm Lock Screw
22	30482	Arm Lock Pin
23	S-1435	*Pan Hd Screw Type 23 8-32 x 1/2
24	37365	Switch Key
25	37366	Switch Cover
26	37367	Switch
27	9-2536	†Work Light
28	9-29525	†Molding Cutter Guard
29	37369	Trim
30	37370	Arm Latch Shaft Assembly
31	30655	Retaining Ring
32	30489	Spring Support Washer
33	30490	Arm Latch Spring
34	37371	Trim Cap
35	S-1265	*Pan Hd Mach Screw 10-32 x 3/4
36	37372	Arm Latch Lever
37	37493	Groove Pin Type S 3/16 x 1-3/4
38	S-1438	Steel Washer .505 x 1-1/8 x 1/16
39	37373	Spring Washer
40	37374	Handle
41	S-1439	*Truss Hd Mach Screw 1/4-20 x 1-3/8 with Lockwasher
42	30493	Wing Nut
43	S-1216	*Steel Washer 11/32 x 7/8 x 1/16
44	30494	Collar
45	9-3240	†10" Kromedge Chisel Tooth Saw Blade
46	30495	Shaft Nut
47	3540	Arbor Wrench
48	9-3247	†Dado Set
49	9-3220	†Molding Cutter Head
50	30496	Shaft Wrench
51	S-1459	Steel Washer .505 x 1 x 1/32
52	S-1343	Medium Lockwasher 5/16 SAE
53	S-1293	*Internal Shake Proof Lockwasher #1206

* Standard hardware item — may be purchased locally.

† Accessory item not furnished with saw—contact your nearest Sears Retail Store or Mail Order House.

NOTE: Shipping and handling charges for standard hardware items (identified by*) such as nuts, screws, washers, etc. make buying these items by mail uneconomical. To avoid shipping and handling charges, you may obtain most of these locally.

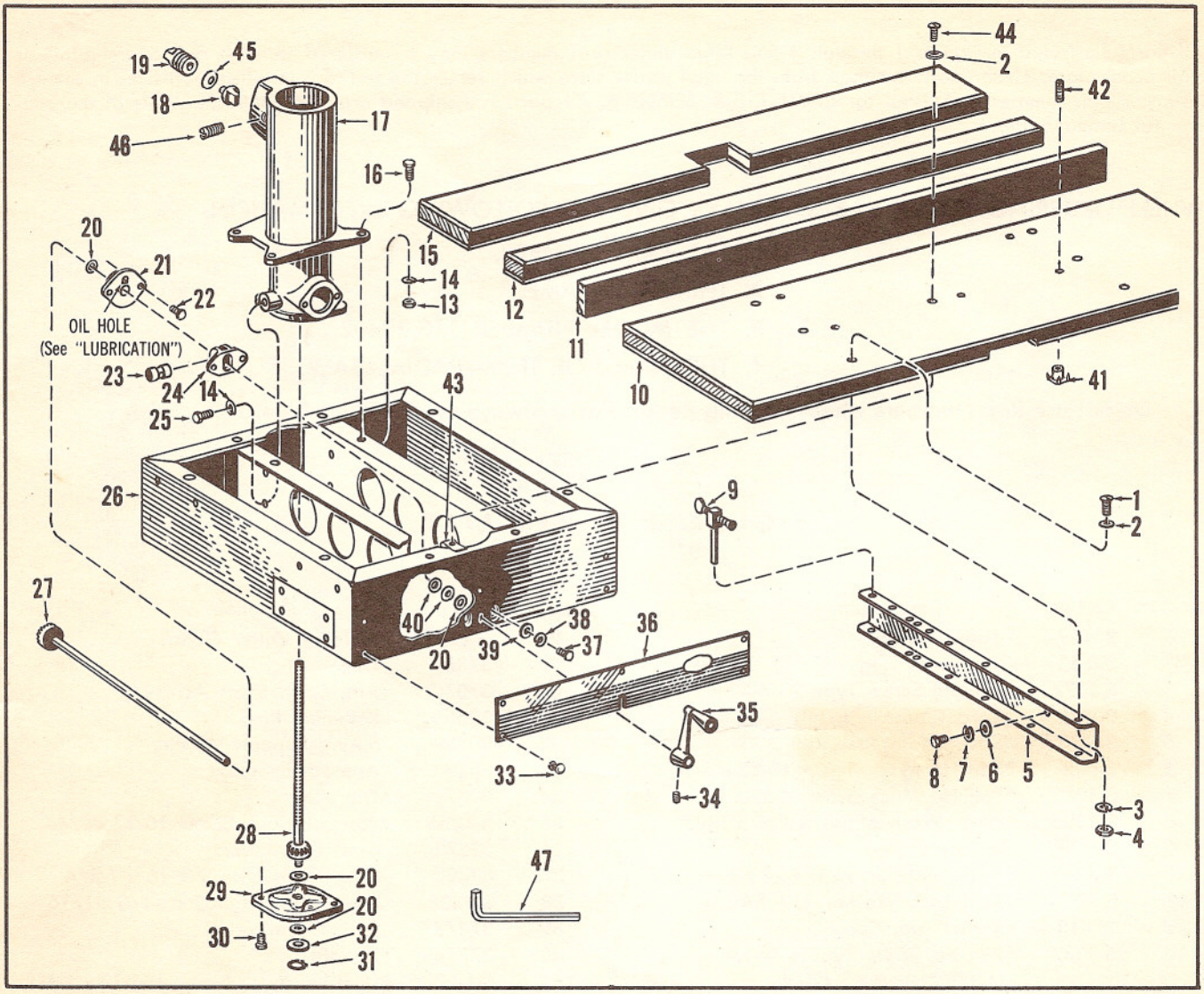


FIGURE 2 PARTS LIST

Ref. No.	Part No.	Description
1	S-1346	*Rd Hd Mach Screw 1/4-20 x 7/8
2	S-1284	*Steel Washer 17/64 x 5/8 x 1/32
3	S-1255	*Med Lock Washer 1/4 SAE
4	S-1258	*Hex Nut 1/4-20 x 7/16 x 3/16
5	37375	Channel
6	S-1216	*Steel Washer 11/32 x 7/8 x 1/16
7	S-1343	*Med Lock Washer 5/16 SAE
8	S-1347	*Hex Hd Mach Screw 5/16-18 x 1/2
9	30501	Table Clamp
10	37376	Front Table
11	37377	Fence
12	37378	Table Spacer Board
13	S-1348	*Hex Nut 3/8-16 x 9/16 x 21/64
14	S-1349	*Med Lock Washer 3/8 SAE
15	37379	Rear Table
16	S-1350	*Hex Hd Mach Screw 3/8-16 x 1-1/8
17	37380	Column Support
18	37381	Column Tube Key
19	37382	Key Plug
20	30509	End Play Washer #8 (as req'd)
21	30510	Elevation Shaft Brg Bracket
22	S-1353	*Hex Hd Mach Screw
23	30511	Pivot Pin
24	30512	Bearing Bracket
25	S-1354	*Hex Hd Mach Screw 3/8-16 x 5/8
26	37383	Base Assembly
27	30508	Elevation Crank Shaft Assembly
28	30678	Elevation Shaft Assembly
29	37428	Retaining Plate
30	S-1355	*Hex Hd Mach Screw 5/16-18 x 7/8
31	30516	Retaining Ring
32	S-1356	*Steel Washer .515 x 7/8 x 1/32
33	30675	Stud Fastener
34	S-1389	*Socket Hd Set Screw 1/4-20 x 3/8
35	30518	Elevation Crank Assembly
36	30517	Nameplate
37	S-1359	*Hex Hd Mach Screw 10-32 x 3/8
38	S-1358	*Med Lock Washer #10 SAE
39	S-1375	*Steel Washer 13/64 x 7/16 x 1/16
40	30604	Oil Sling Washer
41	37384	T-Nut
42	S-1440	Slotted Set Screw 1/4-20 x 1/2
43	37530	"U" Clip Nut 1/4-20
44	S-1480	Pan Hd Screw 1/4-20 x 1-1/4
45	37814	Spring Washer
46	37815	Nylock Set Screw 1/4-20
47	30505	Hex "L" Wrench 1/8 Across Flats

*Standard hardware item — may be purchased locally.

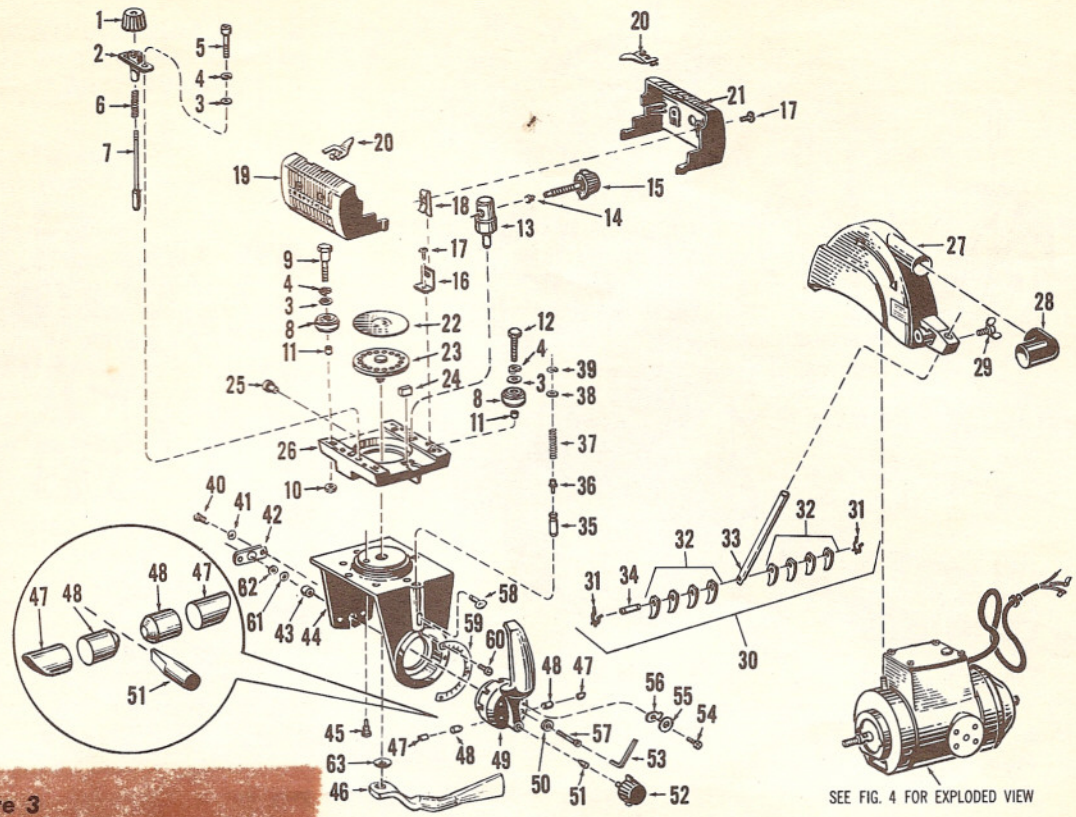


Figure 3

FIGURE 3 PARTS LIST

Ref. No.	Part No.	Description
1	30519	Swivel Latch Pin Handle
2	37385	Latch Pin Housing
3	S-1445	*Steel Washer .328 x 3/4 x 1/16
4	S-1343	*Med Lock Washer 5/16 SAE
5	S-1453	*Hex Hd Indent Screw 5/16-18 x 3/4
6	30521	Swivel Latch Spring
7	37494	Swivel Latch Pin
8	37386	Ball Bearing
9	37387	Eccentric Screw
10	S-1444	*Hex Nut 5/16-18 x 1/2 x 3/16 Steel
11	37388	Bearing Sleeve
12	S-1446	*Hex Hd Mach Screw 5/16-18 x 1
13	37389	Lock Screw Pin
14	37390	Brake Plug
15	37391	Carriage Lock Knob Assembly
16	37392	Carriage Cover Mtg Bracket
17	S-1447	*Pan Hd Screw Type 23 8-32 x 5/16
18	37393	U-Nut
19	37394	Carriage Cover, left hand
20	30683	Rip Scale Indicator
21	37395	Carriage Cover, right hand
22	30618	Dust Cover
23	30566	Yoke Clamp Assembly
24	30567	Bumper #2
25	30565	Bumper
26	37396	Carriage
27	37397	Guard
28	37429	Discharge Elbow
29	30540	Wing Screw
30	37398	Anti Kick Back Pawl Assembly
31	30542	X-Washer
32	30543	Anti Kick Back Pawl

Ref. No.	Part No.	Description
33	37399	Rod
34	37400	Cross Pin
35	30689	Bevel Latch Pin
36	30690	Latch Pin Handle Retainer
37	30548	Latch Pin Spring
38	30547	Disk
39	30546	Retaining Ring #2
40	S-1366	*Hex Hd Mach Screw 1/4-20 x 7/16
41	S-1255	*Med Lock Washer 1/4 SAE
42	37401	Motor Support Bushing Plate
43	37402	Motor Support Bushing
44	37426	Yoke
45	30558	Lock Screw
46	37403	Yoke Clamp Handle
47	30665	Index Handle Brake Shoe
48	30663	Expander
49	30556	Bevel Index Handle
50	30606	Index Handle Washer
51	30664	Pressure Pad
52	30551	Bevel Lock Knob Assembly
53	37435	Hex "L" Wrench 1/4 across flats
54	S-1391	*Pan Hd Mach Screw 6-32 x 3/16
55	S-1385	*Fibre Washer .140 x .250 x 1/32
56	30559	Indicator #2
57	S-1452	*Socket Hd Cap Screw 5/16-18 x 1-1/2
58	30693	Latch Pin Handle
59	30592	Bevel Scale
60	S-1372	*Drive Screw Type U #2 x 1/8
61	30509	End Play Washer #8
62	30604	Oil Sling Washer
63	37815	Steel Washer .505 x 1-1/8 x 3/32

* Standard hardware item — may be purchased locally.

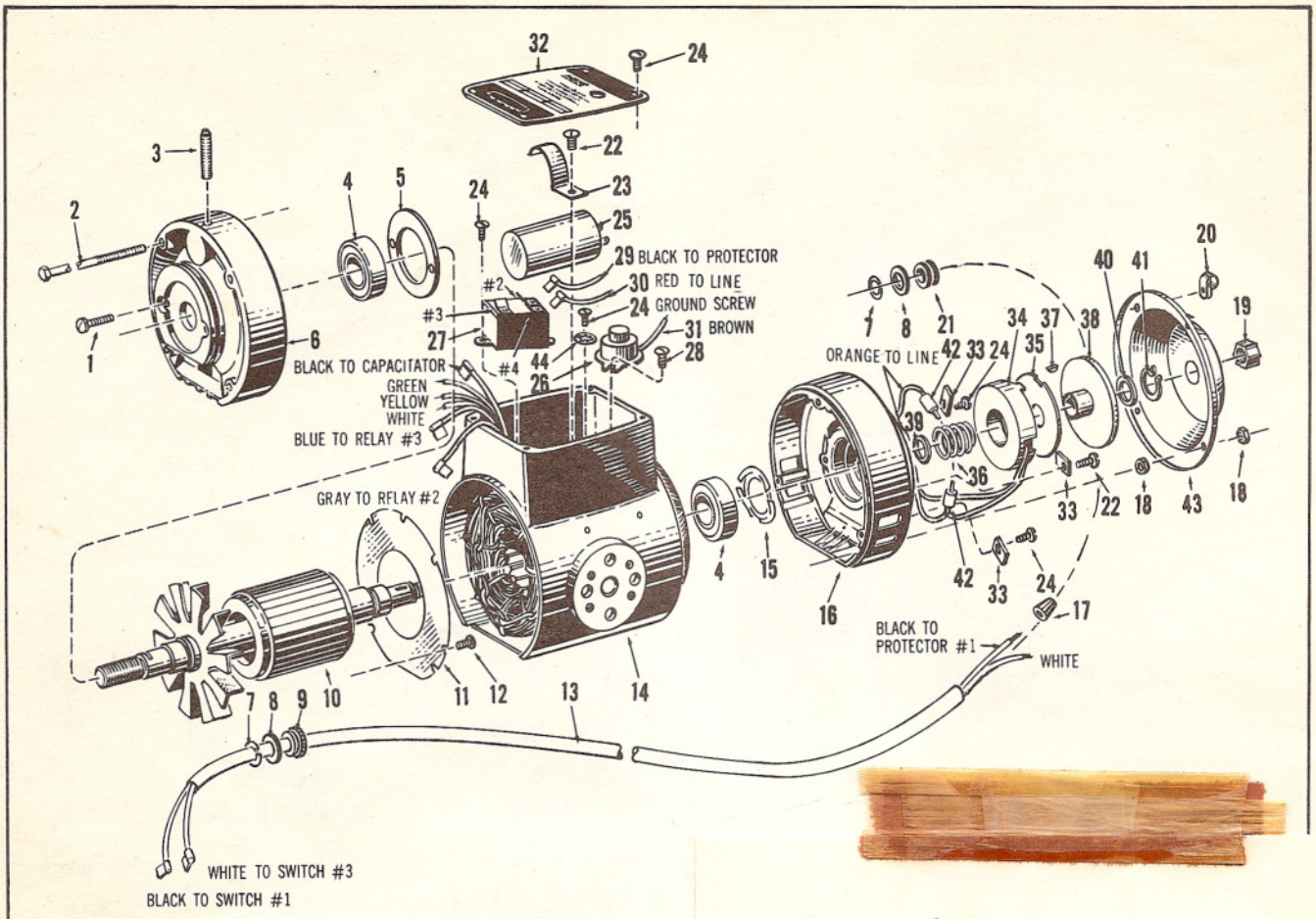


Figure 4

On page 6, Figure 4, items 7, 8, & 21 have been replaced with a Heyco strain relief part number 37818.

FIGURE 4 PARTS LIST

Ref. No.	Part No.	Description
	37442	Assem Motor (Less Guard Stud)
1	S-1367	*Pan Hd Mach Screw with Lockwasher 10-32 x 1
2	30697	Stator Screw #2
3	30570	Guard Stud
4	30571	Bearing
5	30572	Bearing Retainer Plate
6	37427	End Shield #2
7	30574	Hog Ring
8	S-1368	*Fibre Washer .380 x 9/16 x 1/32
9	30575	Insulating Bushing
10	37404	Assembled Rotor
11	30577	Baffle Plate
12	S-1227	*Pan Hd Mach Screw 8-32 x 1/4
13	37817	Cord
14	37406	Assembled Stator
15	30580	Spring Washer
16	37407	End Shield
17	30573	Wire Connector
18	S-109	*Hex Nut 8-32 x 11/32 x 1/8
19	30582	Shaft Cap
20	30613	Cord Clamp #2
21	30583	Grommet
22	S-1285	*Pan Hd Mach Screw 8-32 x 3/8
23	30700	Capacitor Clamp
24	S-1369	*Pan Hd Mach Screw 6-32 x 5/16
25	30586	Capacitor
26	37408	Protector
27	30588	Relay
28	S-1370	*Pan Hd Mach Screw 6-32 x 7/16
29	37409	Assembled Lead #1
30	37410	Assembled Lead #2
31	30619	#16 AWG U.L. Approved Wire 3-1/2"
32	37411	Nameplate
33	37412	Cleat
34	37413	Brake Coil Housing Assem
35	37414	Brake Shoe Assembly
36	37415	Spring
37	S-1448	*Woodruff Key
38	37416	Brake Disk
39	S-1450	*Spacer Washer
40	S-1449	*Spacer Washer
41	30783	*Retaining Ring
42	37417	Rectifier
43	37434	Brake Cover
44	S-1293	*Internal Shake Proof Lockwasher #1206
None	37495	Operating Instructions & Parts List for Craftsman Accra-Arm 10" Radial Saw Model 113.29402

* Standard hardware item — may be purchased locally.

Instructions for Assembling and Operating Your Saw

NOTE: WHEN ORDERING REPAIR PARTS REFER TO PARTS LIST FOR CORRECT PART NUMBER.

1. Arbor Wrench
2. Shaft Wrench
3. Table Clamp
4. Adapter Plug
5. Yoke Clamp Handle
6. Radial Arm Indicator
7. Carriage Lock Knob
8. Rip Scale Indicator
9. Swivel Latch Pin Handle
10. Latch Pin Handle
11. Switch Key
12. Arm Latch Lever
13. Arm Latch Handle
14. Bevel Index Handle
15. Discharge Elbow
16. Anti Kick Back Pawl Assembly
17. Bevel Lock Knob
18. Bevel Index Scale and Indicator
19. Elevation Crank
20. Hex "L" Wrench

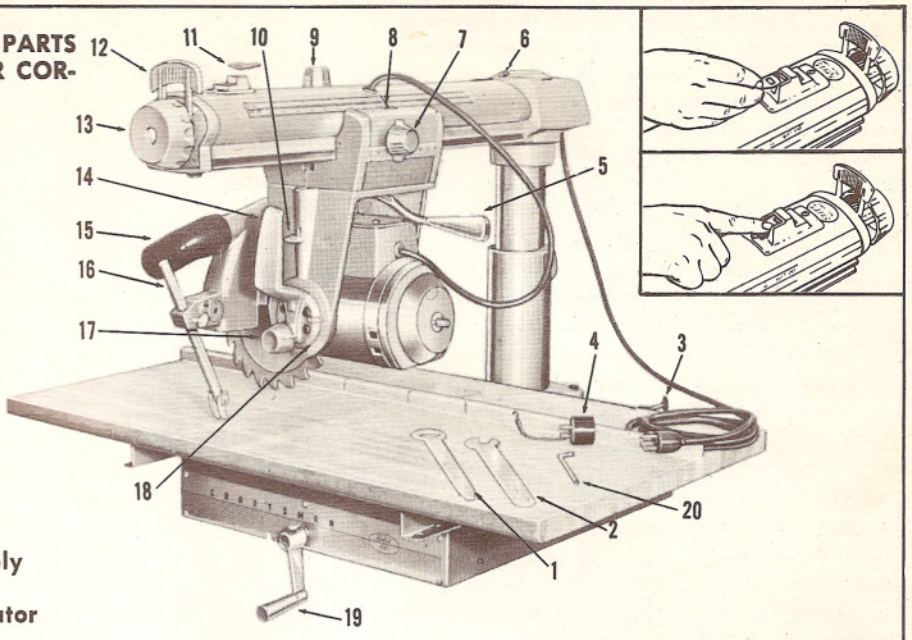


Figure 5

ASSEMBLING-ADJUSTING

CONNECTING THE MOTOR TO THE POWER SUPPLY

Motor Specifications

115/230 volt, 10/5 amps, 3450 RPM, 60 cycle, alternating current (A.C. only) single phase, non-reversible. Rotation: clockwise viewing saw blade end of motor shaft.

The motor as shipped is connected for 115 volts. For 115 volt operation see Figures 6 and 7 for connecting plug and cord from saw into 115 volt receptacle.

Safety Precaution

The saw motor is equipped with a manual reset, thermal overload protector. If during operation this protector opens the line, immediately press the switch "Off". The protector can be closed again after the motor has cooled by firmly pushing the red button on the capacitor cover until the protector snaps into the running position. Do not tap or strike the reset button. This protector is not intended to take the place of a fuse as the protector will not provide protection against overloads or short circuits in the lines leading to the motor. *The motor should not be operated on a load which causes the protector to open the line frequently.*

For circuit protection use a "Fustat" or "Fusetron" fuse —15 ampere fuse for 115 volt operation and 7½ ampere fuse for 230 volt operation.

For 230 volt operation, see connecting instructions on motor nameplate. Also see the "Warning Label" on the rear of the saw base.

"IMPORTANT" The following wire sizes are recommended for connecting the motor to a power source for **TROUBLE FREE OPERATION.**

Length of Conductor	Wire Size Required (American Wire Gauge No.)
115 Volt Lines	
50 feet or less	No. 12
100 feet or less	No. 10
100 feet to 150 feet	No. 8
150 feet to 200 feet	No. 6
200 feet to 400 feet	No. 4
230 Volt Lines	
50 feet or less	No. 14
100 feet or less	No. 12
100 feet to 150 feet	No. 10
150 feet to 200 feet	No. 8
200 feet to 400 feet	No. 6

For circuits of greater length the wire size must be increased proportionally.

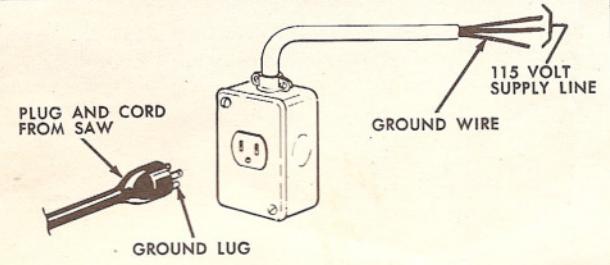


Figure 6

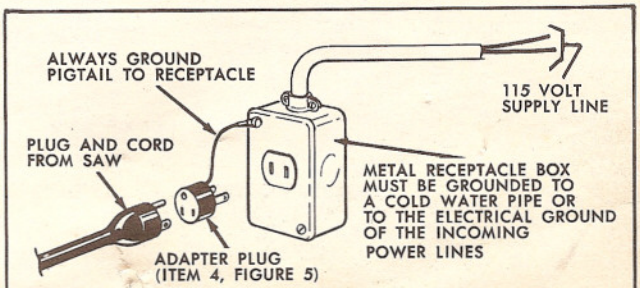

ALWAYS GROUND PIGTAIL TO RECEPTACLE
115 VOLT SUPPLY LINE
PLUG AND CORD FROM SAW
METAL RECEPTACLE BOX MUST BE GROUNDED TO A COLD WATER PIPE OR TO THE ELECTRICAL GROUND OF THE INCOMING POWER LINES
ADAPTER PLUG (ITEM 4, FIGURE 5)

Figure 7

MOUNTING THE SAW TO A WORK BENCH

The saw should be placed on a suitable sturdy work bench and the base positioned so that the elevation crank (figure 8a) is free to rotate. The base of the saw must be mounted flush to a flat surface on the work bench to prevent distortion of the saw base. The nuts, screws, and washers which attach the wooden shipping skids to the saw base may be used to secure the saw base to the work bench.

INSTALLATION OF FRONT TABLE

1. Lay large table board on floor upside down. (Bottom side has cutout for clearance of elevating crank). Distinguish between 5 thru-bored holes and 7 countersunk holes. Drive tee-nuts into 5 thru-bored holes. (See Figure 8b.)
2. Place large table board on channels with cutout notch forward and down as shown in Figure 8a.
3. Align countersunk holes with holes in channels. Place 1/4" flat washer and 1/4 x 20 x 7/8 machine screw in the 6 countersunk holes above the channels. Use 1/4 x 20 x 1-1/4 machine screw for countersunk hole in center of table board.
4. Attach lockwashers and nuts to 6 screws in channels, and tighten securely. Thread center screw into clip nut in base, do not tighten until later.

ADJUSTING THE TABLE PARALLEL TO THE RADIAL ARM

1. Remove saw guard.
2. Insert set screws into leveling nuts (T-nuts) from top side until they just touch the top of the base frame.
3. Tighten both channel clamping bolts (Fig. 10) at front of base until they are snug (use wrench but do not pull up solid.) Tighten channel clamping bolts at back of base only to a finger tightness.

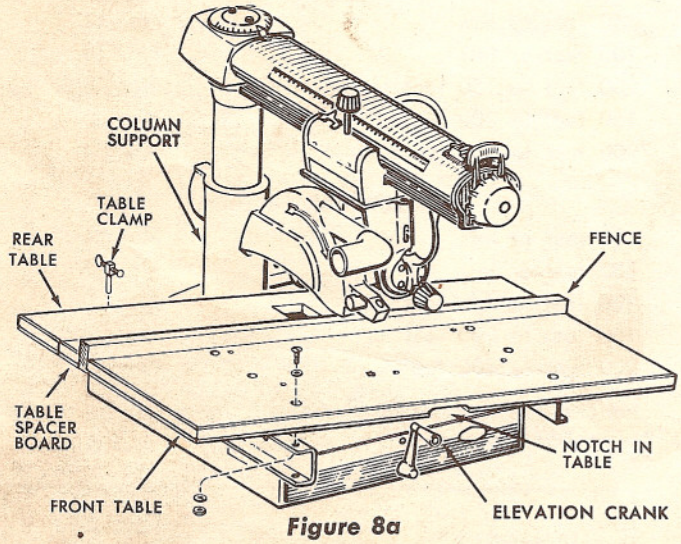


Figure 8a

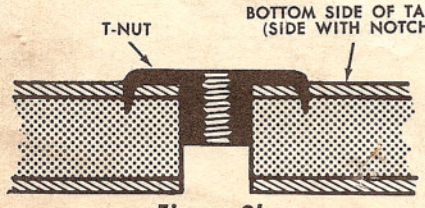


Figure 8b

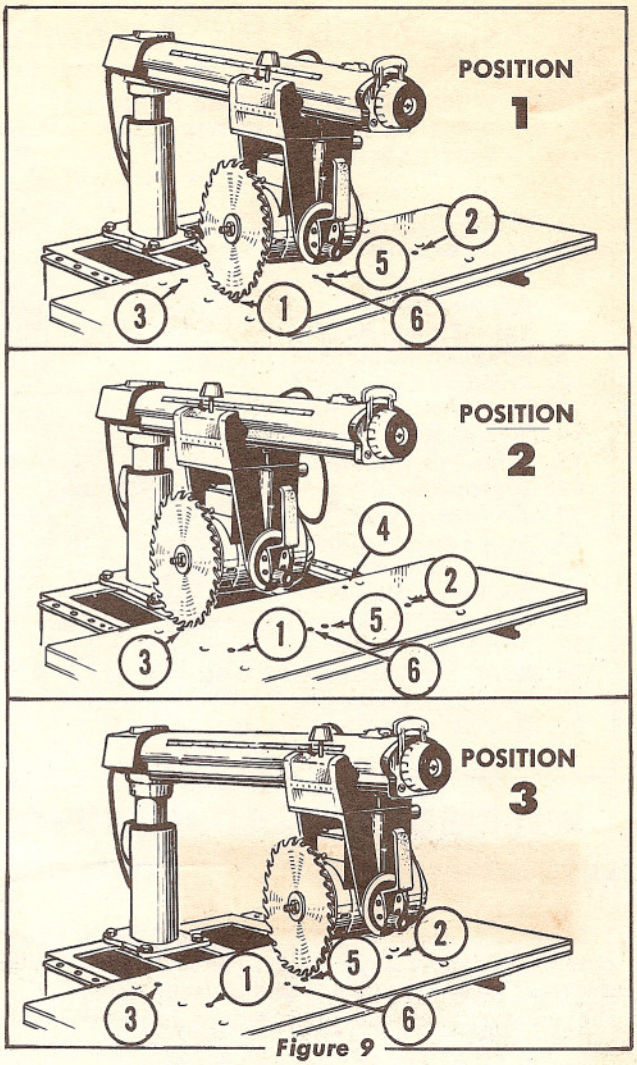


Figure 9

4. Release arm latch (Item 12, Fig. 5) and carriage lock (Item 7, Fig. 5) for easy movement of blade during leveling operation. Lower blade and move to points 1, 2, 3 and 4 (Fig. 9) to find at which of these points the blade first touches the top of the table. Spin blade by hand and listen for pinging sound to pick up this high point.
5. High point must be at one of the front leveling screw holes before continuing leveling procedure. If it is not at the front, adjust screw at point 1 or 2 so that high point is created at the front near point 1 or 2. Raise blade slightly to pick up pinging sound at this new high point.
6. DO NOT CHANGE ELEVATION OF BLADE FOR REMAINDER OF LEVELING OPERATION.
7. Move blade to back of table directly behind the high point. Raise table to blade height at this point by adjusting leveling screw in this area. Tighten channel clamping bolt at back of base on leveled side.
8. Return blade to front of table and make slight adjustment in leveling screw in this area if necessary.

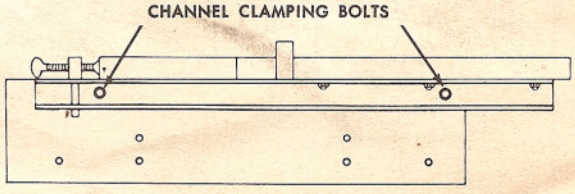


Figure 10

9. Swing blade to front side of table on opposite side of base. Adjust screw in this area to bring table to blade height.
10. Move blade to back of table on this side. Adjust screw in this area.
11. Tighten all channel clamping bolts.
12. Move blade to all four leveling screw positions to re-check. Blade should ping at all positions. Make slight adjustments if necessary.
13. Move blade to center of table. If table is low at this point, raise by adjusting set screw #5. It may be necessary to back off screw #6 to provide clearance.
14. If table is high at center, lower by tightening screw #6. When table is level, turn in set screw #5 until it bottoms on the base. This will serve as lock for the adjustment of screw #6.
15. Lay rip fence in vertical position behind front table.
16. Lay table spacer board behind rip fence.
17. Lay rear table behind table spacer board. Place cut-out section forward.
18. Install table clamps as shown and tighten securely against edge of rear table.

SQUARING THE SAW BLADE TO THE TABLE TOP

1. Place the edge of a square on table top and position as shown in Figure 11.
   Square must be held firmly against table top.
2. When blade is square to the table no light will be visible between square and face of saw blade. *Do not allow square to rest on saw teeth.*
   If light is visible between steel square and face of saw blade adjust as follows:
   a. Loosen bevel lock knob (Item 1, figure 11). Use 7/32 hex "L" wrench and slightly loosen four socket head screws (Item 2, figure 11).
   b. Hold motor shaft at both ends and tilt motor in proper direction until saw blade is square to table top.
   c. Retighten socket head screws (Item 2, figure 11) and bevel lock knob (Item 1, figure 11).
   d. Recheck blade squareness to table top since tightening of screws may have shifted motor.
   e. Indicator (Item 3, figure 11) should read 0° on bevel index scale. If not, loosen screw and adjust indicator. Retighten screw.

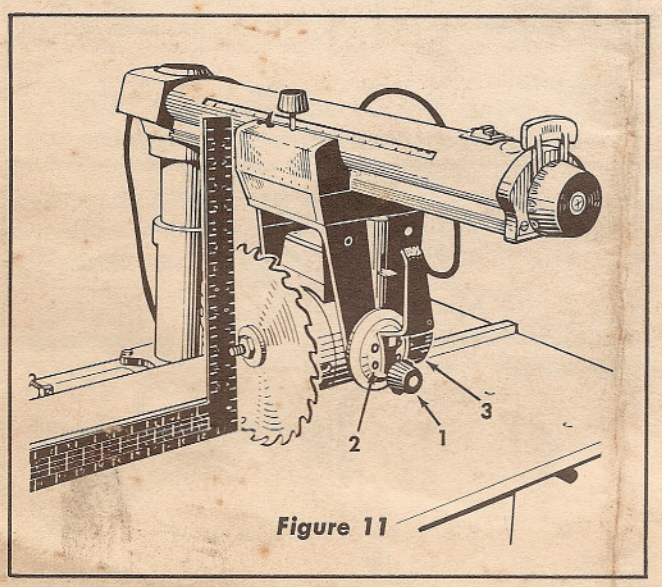
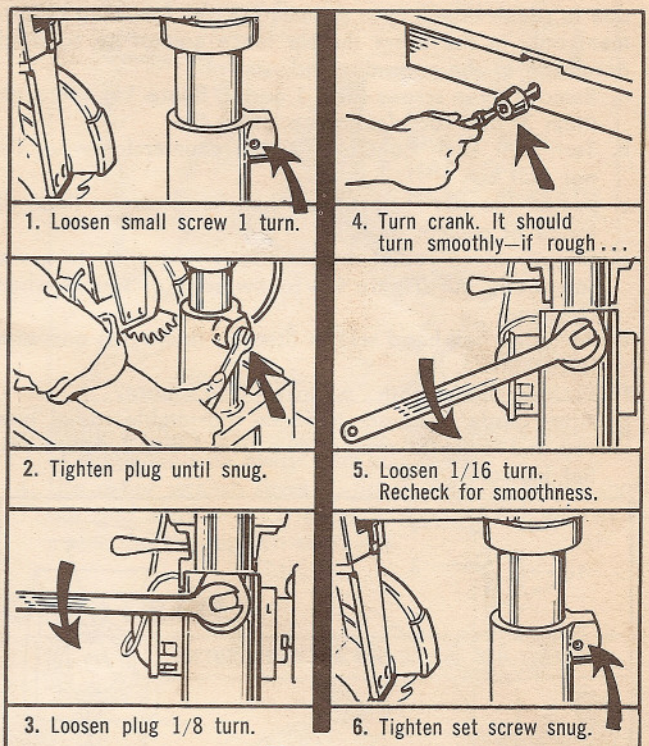


Figure 11

ELIMINATING RADIAL ARM SIDE PLAY


1. Loosen small screw 1 turn.
4. Turn crank. It should turn smoothly—if rough . . .
2. Tighten plug until snug.
5. Loosen 1/16 turn. Recheck for smoothness.
3. Loosen plug 1/8 turn.
6. Tighten set screw snug.
Figure 12

SQUARING THE CROSS CUT TRAVEL TO THE FENCE

1. Set radial arm at 0° index position and tighten arm latch handle. (Item 1, figure 13.)
2. Lay square against fence as shown in Figure 13 and position until it just contacts a blade tooth (See A, figure 13). Mark this tooth.
3. When blade is moved back and forth on radial arm saw tooth "A" should just touch square at all positions.

If saw tooth "A" does not touch square as in step 3, adjust as follows:

a. If saw tooth "A" (Figure 13) moves away from the square when moving the blade from the rear to the front of the table, loosen the table bolts on the left side of the table and tighten the left table clamp (Item 3, figure 5).
b. Recheck blade squareness and, if correct, tighten table bolts.
c. Reverse this procedure if tooth "A" moves into the square when moving the saw blade from the rear to the front of the table.

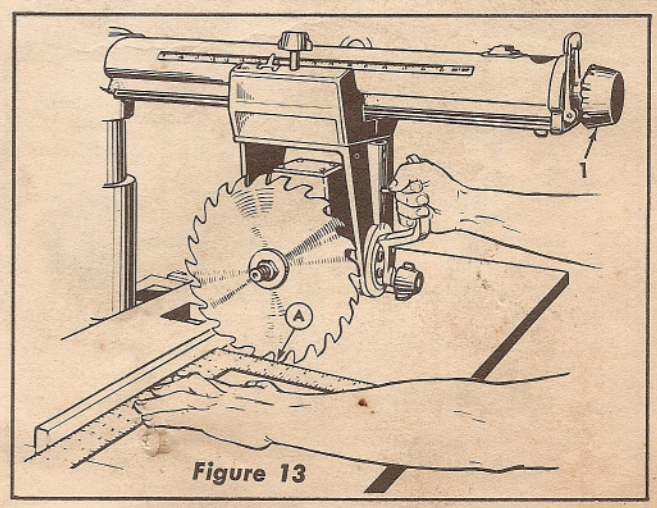


Figure 13

In extreme cases, the above adjustment may not be sufficient due to rough handling in shipment. Make following adjustment only in the event the rip fence cannot be squared according to the preceding adjustment.

a. Remove three screws (Item 1 and 2, figure 14), indicator (Item 3) and radial arm cap (Item 4).
b. Turn arm latch handle 1/2 turn counterclockwise. Do not pull out.
c. Loosen (do not remove) two hex head screws (Item 5) inside of column tube.
d. Slightly move radial arm in proper direction to make saw tooth "A" (Figure 13) follow edge of square when checking.
e. Retighten hex head screws (Item 5, figure 14) and arm latch handle.
f. Recheck blade tooth "A" travel with square.
g. After blade is square to fence reassemble radial arm cap and indicator using screws (Item 1 and 2, figure 14). Set indicator at 0°.

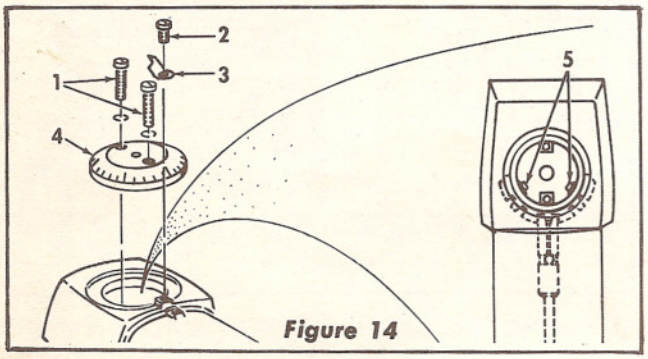


Figure 14

PRELIMINARY CROSS-CUT AT THE 0° POSITION

1. Attach saw guard (Item 1, figure 15) washer (Item 2) and wing nut (Item 3) to motor and motor stud (Item 4).
2. Pull motor forward of fence so that blade is free to rotate.
3. Lower radial arm until saw blade just clears table top.
4. Tighten carriage lock knob (Item 5, figure 15).

CAUTION

Before cutting always be sure that the arm latch handle is locked fully clockwise. (Item 8, figure 15.)

5. Plug in power cord to receptacle.
6. Insert switch key (Item 6, figure 15) and press "On".
7. Lower radial arm until blade cuts into table top 1/32". THIS IS ALL THAT IS NECESSARY.

To cut a blade clearance groove in the table and fence hold the bevel index handle (Item 7, figure 15) with the left hand and loosen the carriage lock knob (Item 5, figure 15) with the right hand. Slowly pull the motor with the left hand out to the extreme end of travel and then push the motor back through the fence to the extreme rear position. *Push the key switch "Off".*

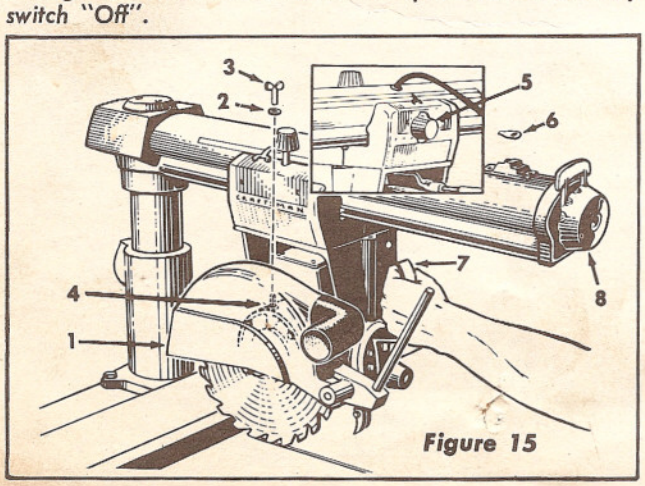


Figure 15

CHECKING THE SAW BLADE FOR HEEL (LEFT AND RIGHT)

1. Place a square against the rip fence and the saw blade as shown in Figure 16. Square must be held firmly against the rip fence and the blade of the square must not touch any of the teeth on the saw blade.
2. If there is a gap between the saw blade and the blade of the square one of two types of heel exists. The two types of heel ore shown in views A and B.
3. To correct for heel, proceed with items 4 through 10.
4. Remove left hand carriage cover (item 1, figure 17).
5. Loosen yoke clamp handle (Item 2, figure 17) by pulling the handle horizontally toward the front of the saw.
6. Slightly loosen the two socket head cap screws (Item 3, figure 17).
7. Rotate the yoke until the gap between the saw blade and the blade of the square is eliminated.
8. Relock yoke by pushing the yoke clamp handle toward the rear of the saw and retighten the two socket head cap screws (Item 3, figure 17).
9. Recheck for heel as before.
10. Replace carriage cover.

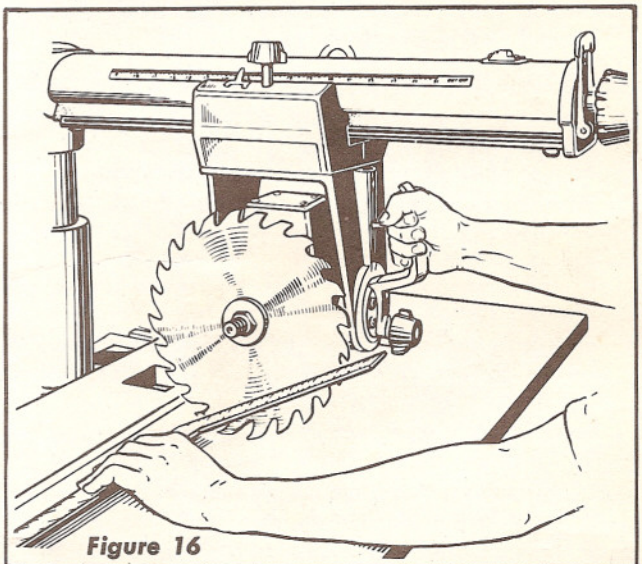
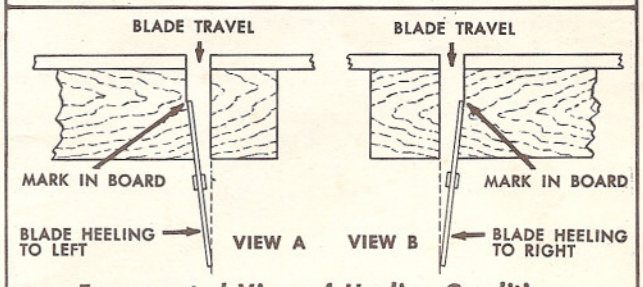


Figure 16



Exaggerated View of Heeling Condition

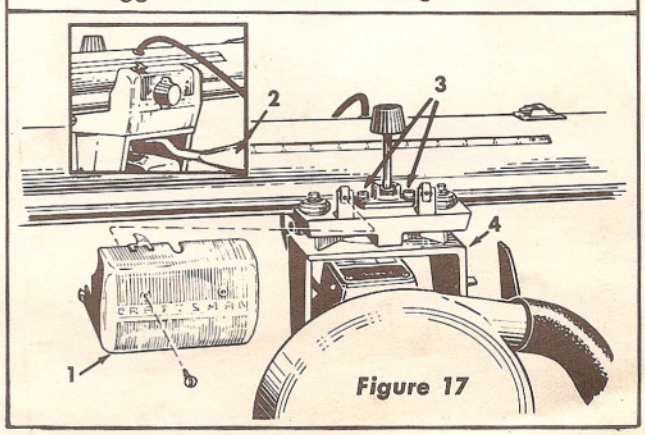


Figure 17

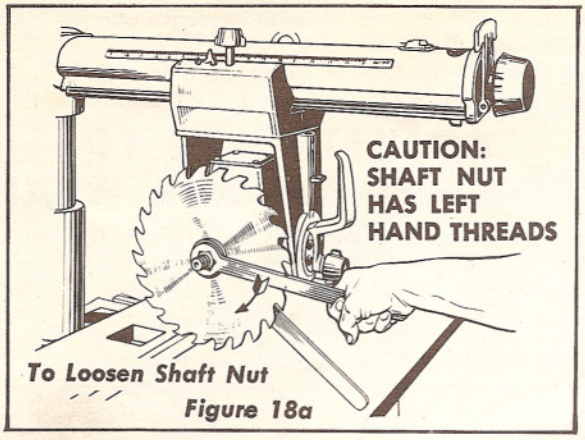


Figure 18a

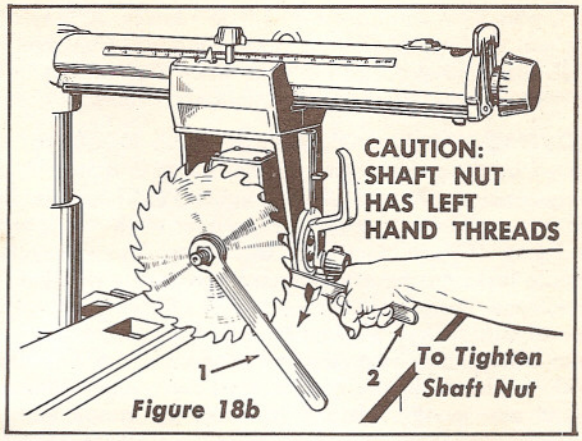


Figure 18b

ATTACHING AND DETACHING THE SAW BLADE

1. Remove shaft nut and one loose collar.
2. Place saw blade on motor shaft taking care that saw blade teeth are in same direction as shown in Figure 18a.
3. Replace other loose collar and shaft nut. Smooth face of collar must be away from saw blade.
4. Use arbor wrench (Item 1, figure 18b) on motor shaft nut and shaft wrench (Item 2, figure 18b) on slot in motor shaft to tighten shaft nut.

OPERATING CONTROLS

1. Arbor Wrench
2. Shaft Wrench
3. Table Clamp
4. Adapter Plug
5. Yoke Clamp Handle
6. Radial Arm Indicator
7. Carriage Lock Knob
8. Rip Scale Indicator
9. Swivel Latch Pin Handle
10. Latch Pin Handle
11. Switch Key
12. Arm Latch Lever
13. Arm Latch Handle
14. Bevel Index Handle
15. Discharge Elbow
16. Anti Kick Back Pawl Assembly
17. Bevel Lock Knob
18. Bevel Index Scale and Indicator
19. Elevation Crank
20. Hex "L" Wrench

NOTE: WHEN ORDERING REPAIR PARTS REFER TO PARTS LIST FOR CORRECT PART NUMBER.

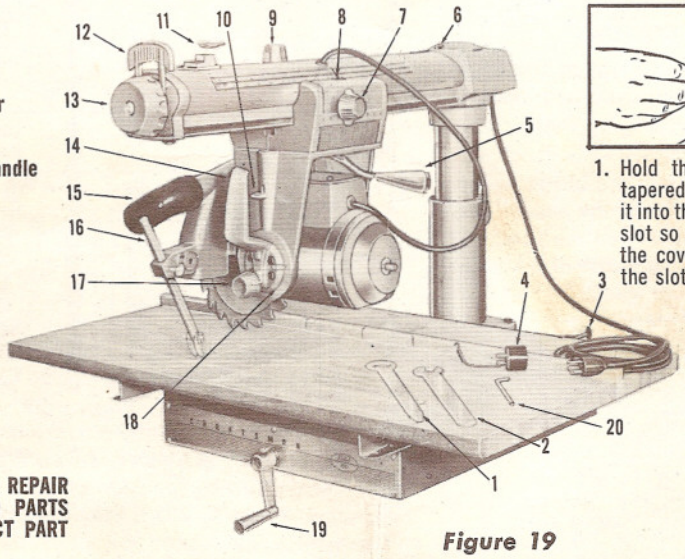
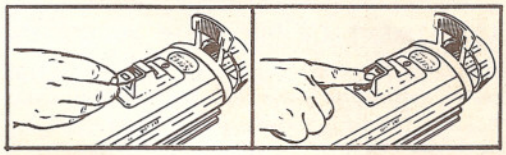
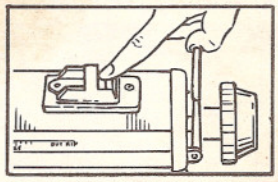


Figure 19

INSTRUCTIONS FOR USE OF KEY AND SWITCH



1. Hold the key by the tapered end and insert it into the switch cover slot so that the tab in the cover fits through the slot in the key.
2. To turn on the saw, press on the key after it is positioned in the switch cover.



3. To turn off the saw, press the black button protruding through the switch cover.

RAISING AND LOWERING THE RADIAL ARM is accomplished by the elevation crank (Item 19, figure 19). *One complete turn of this handle will raise or lower the radial arm 1/8".*

LOCKING THE CARRIAGE TO THE RADIAL ARM is accomplished by the carriage lock knob (Item 7, figure 19). Turn the knob clockwise to lock; counterclockwise to unlock.

ANGULAR MOVEMENT AND LOCKING OF THE RADIAL ARM are controlled by the arm latch lever (Item 12, figure 19) and the arm latch handle (Item 13, figure 19). The radial arm can be rotated 360° and locked in any position. The arm is unlocked from any position by a slight counterclockwise rotation of the arm latch handle and is locked in any position by rotating the arm latch handle clockwise until tight. The radial arm has positive stops at 0° and 45° left and right, and is released from these index positions by unlocking the arm latch handle and pulling out the arm latch lever (Item 12, figure 19).

For most positive and accurate settings at the index positions, the following is recommended:

1. If the radial arm is already indexed, unlock and pull out the arm latch lever and move the radial arm off of the index position. Release the arm latch lever.
2. Before moving the radial arm to the desired index position, turn the arm latch handle (Item 13, figure 19) just 1/4 turn counterclockwise from the locked position.
3. Move the radial arm into the index position (do not bump or jar) and push on the handle or the arm latch lever solidly with the palm of the hand.
4. Lock the radial arm by turning the arm latch handle fully clockwise.

CAUTION: When moving the radial arm in any direction beyond 45° left or right, always pull out the arm latch lever (at end of radial arm) to prevent damaging the arm lock pin. If damage occurs, the radial arm will not index properly at 0° and 45° left or right.

MOVEMENT AND POSITION OF THE MOTOR IN THE YOKE are controlled by the latch pin handle (Item 10, figure 19) and bevel lock knob (Item 17, figure 19). The bevel scale indicates the angular position of the motor with respect to the horizontal from 0° to 90° in either vertical position. The latch pin handle automatically indexes the motor at 0°,

45°, and 90° up and down. Lift to release. At any other position the latch pin handle is not engaged. The bevel lock knob locks the motor to the yoke when the motor is in any position. Locking is clockwise; unlocking is counterclockwise.

MOVEMENT AND POSITION OF THE YOKE are controlled by the swivel latch pin knob (Item 9, figure 19) and the yoke clamp handle (Item 5, figure 19). The swivel latch pin automatically indexes the yoke at each 90° position and two 45° positions. Lift to release. The yoke clamp handle locks the yoke to the carriage in any position. Pull to release. Push to tighten. When "In Ripping" it may be desirable to have more free table in front of the saw blade than is obtainable when the radial arm is at the 0° position. With the blade in the normal cross-cut position index the radial arm to 45° left and lock it. Then loosen the yoke clamp handle and index the yoke 45° clockwise. Reclamp the yoke clamp handle. The added free table space is now to the right of the blade and ripping should be done from the right side of the table. The reverse is also true for "Out Ripping" by indexing the radial arm 45° right and indexing the yoke 45° counterclockwise. The added table space is now to the left of the blade and ripping should be done from the left side of the table.

CAUTION: Under these two conditions the In-Rip and Out-Rip scales cannot be used.

ADJUSTMENT OF RIP SCALE INDICATORS

When the fence is in its normal position (next to the front table), index the yoke 90° from the cross-cut position so that the blade is between the motor and the fence. Lock the yoke.

Move the motor along the radial arm until the blade, when spun by hand, just touches the front face of the fence (See Figure 20). The indicator (Item 8, figure 19) on the "In-Rip" scale should now read 0. If not, shift the position of the indicator to read 0.

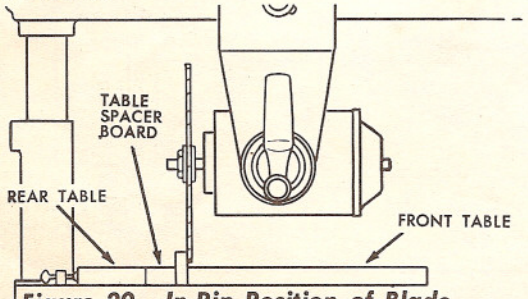


Figure 20 — In-Rip Position of Blade

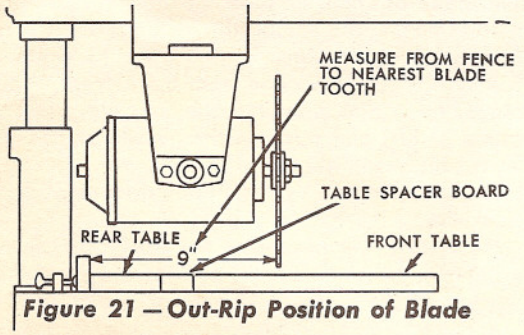


Figure 21 — Out-Rip Position of Blade

The same indicator should also read correctly on the "Out-Rip" scale when the blade is in the out-rip position. **This indicator should be reset with any blade change.**

The "Out-Rip" scale on the left side of the radial arm is only used when the fence is in its extreme rear position against the table clamps and the blade is in the out-rip position. The same method of adjustment is used for this scale indicator except that the blade is positioned as shown so that 9" is measured between the fence and the nearest blade tooth. (See Figure 21).

The indicator should then be adjusted to read 9" on the "Out-Rip" scale on the left side of the radial arm.

ADJUSTMENTS TO COMPENSATE FOR WEAR

Even though the finest materials and precision workmanship have been used to minimize wear it is reasonable to expect some wear. Adjustments have been built into your Craftsman saw to reduce or eliminate this wear.

ELIMINATING RADIAL ARM SIDE PLAY

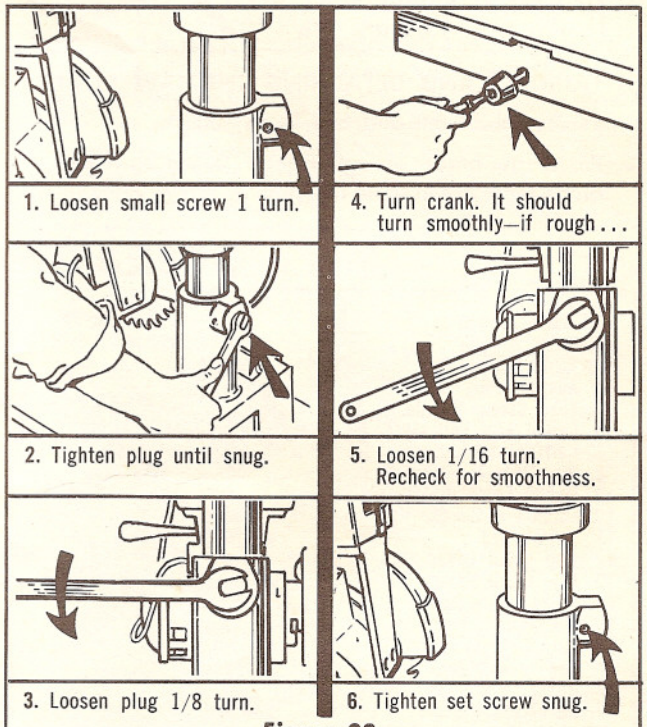

1. Loosen small screw 1 turn.
4. Turn crank. It should turn smoothly—if rough . . .
2. Tighten plug until snug.
5. Loosen 1/16 turn. Recheck for smoothness.
3. Loosen plug 1/8 turn.
6. Tighten set screw snug.

Figure 22

YOKE CLAMP HANDLE ADJUSTMENT

The normal locking position of the yoke clamp handle (Item 1, View A, figure 23) is midway between the two sides of the yoke.

When the handle strikes the yoke before locking, the handle may be adjusted as follows:

1. Remove saw guard and blade.
2. Set yoke clamp handle to Position A, Figure 23. (Midway.)
3. Remove lock screw (Item 3).
4. With off-set screw driver turn slotted end of the yoke clamp (Item 2) counterclockwise until a slight snugness of the yoke clamp handle is felt at Position A, Figure 23.
5. To replace lock screw align holes in yoke clamp with hole in yoke by a slight adjustment of yoke clamp using off-set screw driver. Insert lock screw and tighten.

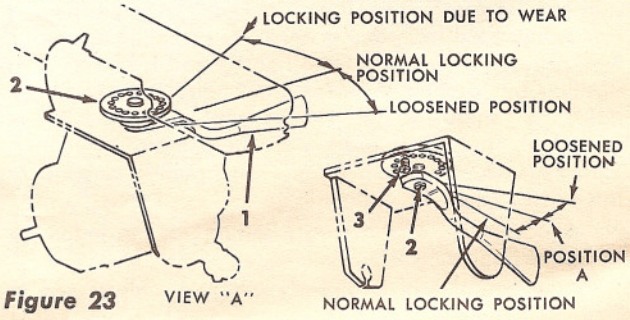


Figure 23

CARRIAGE

To test looseness in the carriage, firmly grasp the carriage (Item 1, figure 24) at the level of the ball bearings and apply a firm rocking motion.

Noticeable looseness may be adjusted as follows:

1. Remove saw guard and blade.
2. Place block of wood on table under motor and turn elevation crank until weight of motor just rests on block.
3. Remove left hand carriage cover (Item 2, figure 24).
4. Loosen nuts (Item 2, figure 25) one or two turns.
5. Turn adjusting screws (Item 1, figure 25) a partial turn left or right as required to take up looseness.
6. Hold head of screw in position established in step 5 above and tighten nut on under side of carriage.
7. Correct adjustment exists when there is no play between the carriage and radial arm, and yet the carriage moves freely.
8. Replace carriage cover.

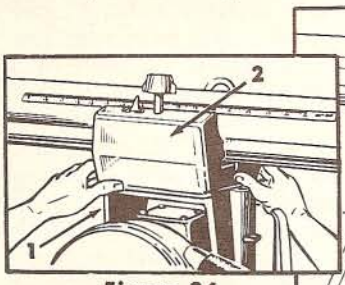


Figure 24

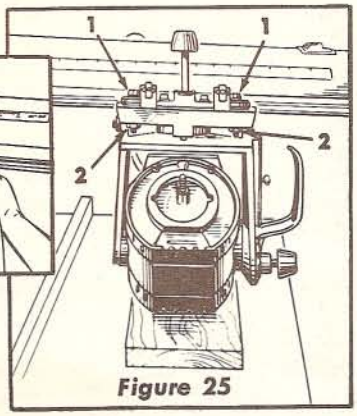


Figure 25

PROPER OPERATING PROCEDURES

DRESS PROPERLY — Operation of the saw is simple, safe and easy—when properly done. Always be alert. Do not wear a tie or other loose articles. Keep long sleeves down with cuffs fastened or wear short sleeves. NEVER STOP BEING CAREFUL. One moment of inattention can cost you a painful injury.

AVOID AWKWARD HAND POSITIONS — Do not get hands into a position in which a sudden slip can cause them to move into the saw blade. NEVER OPERATE THE SAW WITH THE ARMS IN A CROSSED POSITION. Never hold work on right side of blade with left hand while pulling saw with the right hand. Do not attempt free-hand cross-cutting. Use a push stick when hand gets too close to the blade in a ripping position.

NEVER TWIST WORK — Twisting work will bind blade and cause a kickback.

Safety Precaution

The motor is shipped with a shaft cap (Item 19, figure 4) threaded onto the stub end of the motor shaft. When this shaft end of the motor is not being used, this cap should always be attached.

LUBRICATION

Your saw is a fine machine and should be given the best of care. If kept clean and properly lubricated, it will give many years of trouble-free service. Before describing the various points which may periodically require lubrication, IT IS MORE IMPORTANT TO FIRST MENTION THE VARIOUS SPOTS WHICH SHOULD NOT BE LUBRICATED.

NO LUBRICATION REQUIRED

Do not lubricate any ball races or any ball bearings.

Do not lubricate bearing fit of bevel index handle (Item 49, figure 3) in yoke.

Do not lubricate the motor bearings. These are sealed ball bearings and require no added lubrication.

Do not lubricate bevel latch pin (Item 35, figure 3) in yoke.

Do not lubricate between radial arm cap (Item 12, figure 1) and radial arm.

PERIODICALLY LUBRICATE THESE POINTS

Use SAE No. 10-30 Auto Engine Oil.

Apply a few drops of oil along the swivel latch pin (Item 7, figure 3) only if the pin has a tendency to stick. Remove the left-hand carriage cover and use oil sparingly to prevent it from getting on the ball bearings or races.

A light film of oil can be wiped on the face of the column tube (Item 15, figure 1) and keyway to lubricate the fit between this part and the key and column support (Items 17 and 18, figure 2).

Apply a few drops of oil to the bearing surfaces of the elevation crank shaft assembly (Item 27, figure 2). An oiling hole is provided in the elevation shaft bearing bracket (Item 21, figure 2) to facilitate the lubrication of the rear bearing support.

The thread on the elevation shaft assembly (Item 28, figure 2) can be lubricated through the oiling hole in the center of the radial arm cap (Item 12, figure 1).

STANDARD SAW OPERATIONS

CROSS-CUTTING

Cross-cutting is the sawing of wood across the grain. Planks are milled with the grain running the length of the plank. If a straight cross-cut is desired, the board is placed on the saw table against the fence so that the grain is parallel to the fence. See Figure 26.

NOTE

When cross-cutting normal pieces of lumber, the long end of the board should be placed to the left of the saw blade as the board is normally held by the left hand during operation.

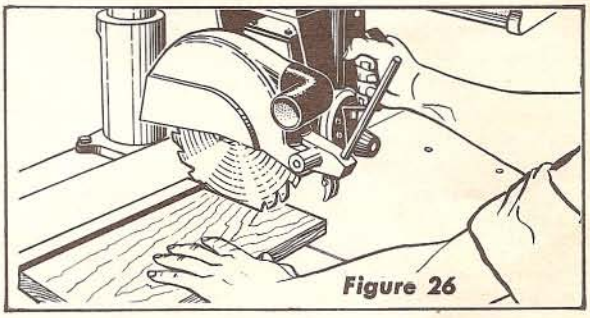


Figure 26

The radial arm must be positioned at 0° as indicated by the radial arm position indicator. The arm latch handle must be indexed and tightened. See Page 11 "Angular Movement And Locking Of The Radial Arm." The yoke must be indexed at the 0° position, making the saw blade perpendicular to the rip fence, and the yoke clamp handle placed in the locked position. The bevel index handle must be positioned at 0°, as indicated by the bevel scale, and locked. Turn the elevation crank to lower the saw until the blade teeth are approximately 1/32" below the table surface and ride in the saw slot made when performing the "PRELIMINARY CROSS-CUT AT THE 0° POSITION". Push the saw carriage to the rear of the radial arm so the blade is behind the rip fence. Adjust the saw guard so the bottom is parallel to the table and set the anti-kickback pawl assembly so it just clears the board to be cut. Press the switch key "On" to start the saw motor. Hold the board firmly against the rip fence with the left hand and grasp the bevel index handle with the right hand. The cut is then made by pulling the carriage forward until the saw blade cuts through the work. When the cut is

complete, the saw should be returned to the back of the radial arm and the switch turned "Off". **When more experience is gained by using the saw it will be noticed that when pulling the saw toward you during cross-cutting, the saw blade tends to feed itself through the work due to the rotation of the blade and the direction of feed. Therefore, the operator should develop the habit of holding his right arm straight from the shoulder to the wrist.** After this method is used a few times the operator will find that it is necessary to roll or rotate the body from the waist up. If this method is followed, it will become apparent that very little effort is required on the part of the operator to move the saw blade through the work, and in most cases, the right arm is used merely to control the rate of feed of the saw through the board. It will also be found that when cross-cutting a thick board it will be necessary to retard movement of the saw through the work. By holding the right arm (right hand normally grips the saw handle) straight, the operator can easily control the rate of feed, thus *preventing the saw blade from overfeeding and stalling the saw motor.* This must be avoided whenever possible. In some cases it may become necessary to cross-cut long boards which extend over the saw table on one, or both sides. This can cause buckling of the board and bind the saw during the cut. To eliminate this condition the ends of the board should be supported. Figure 27 illustrates a typical support which can be made and used to facilitate cross-cutting of long lumber.

RIPPING

Ripping is the sawing of wood with the grain. It is always done with the help of the fence as a guide to position and maintain the work at the correct width for the cut. Because the work is pushed along the fence, it must have a reasonably straight edge to make sliding contact with the fence. Also, the work must make solid contact with the table so that it will not wobble or rock. Provide a straight edge, even if this means temporary nailing of an auxiliary straight edge board to the work. If work piece is warped, turn the hollow side down.

Use of the saw guard is always recommended; and the anti-kickback pawl assembly should always be used in both ripping operations. Before ripping and after the saw has been positioned prior to cutting, the saw guard and anti-kickback pawl assembly must be properly adjusted. Loosen the wing nut holding the guard to the motor and *lower the nose of the guard to within 1/8" above the top surface of the board to be cut. Retighten the wing nut securely.*

CAUTION

The nose of the guard refers to that end of the guard which is opposite to the end which mounts the anti-kickback pawl assembly. Always rip from the nose of the guard. See Warning Label on guard.

At the opposite end of the guard, loosen the wing screw holding the anti-kickback pawl assembly and lower the assembly until the *tips of the pawls are 1/8" below the top surface of the board to be cut. Retighten the wing screw securely.*

IN-RIPPING—*In-rip refers to a position when the blade is between the motor and the fence and parallel to the fence.* See Figure 28. To place the saw in this position, unlock the yoke, disengage the swivel latch pin and rotate the yoke 90° clockwise (viewing it from the carriage) until the swivel latch pin automatically indexes the yoke 90°. Relock the yoke. See "Adjustment of Pointers" to check accuracy of "In-Rip" scale reading. Position the motor on the radial arm until the pointer on the "In-Rip" scale indicates the desired width of the finished cut board. Tighten the carriage lock knob securely. Position the discharge elbow on the guard so that sawdust will be blown toward the rear of the saw. Turn the saw "On" and lower the radial arm until the saw blade cuts into the table top about 1/32". Turn the saw "Off". Now adjust the saw guard and anti-kick pawl assembly as described in the paragraph "Ripping". The board to be ripped must be fed into the saw blade from the right side of the table, therefore, the normal position for the operator is also at the right side of the table. With the left hand safely clear of the blade and holding the board to be ripped down against the table and against the face of the fence as a guide, use the right hand to feed the board into the saw. The left hand should remain stationary, serving as a guide only. As the right hand approaches the left hand, hold a push stick with the right hand to complete the cut. Do not leave a long board unsupported so that the spring of the board causes it to shift on the table. A support like that described in "Cross-Cutting" can be used to support the board behind the blade; and if the board is very long, use another support in front of the saw. Ripped boards up to 8⅞" wide can be cut in the In-Rip position.

OUT-RIPPING—*Out-rip refers to a position when the motor is between the blade and the fence.* Normally, this position is only used when the width of the required ripped board cannot be cut from the in-rip position. Ripped boards up to 18¼" wide can be cut in the out-rip position when the fence is against the front table. If the fence is moved to the extreme rear position against the table clamps, ripped boards up to 25⅜" wide can be cut. To place the saw in the out-rip position, the yoke must be rotated and indexed 90° counterclockwise from the cross-cut position and locked. The same procedure for pre-cutting the table top (See In-Ripping) and adjusting the saw guard and anti-kickback pawl assembly (See Ripping) should be followed. The same procedure for sawing is used except that now the operator stands at the left side of the table and a push stick is normally not required.

The same procedure for sawing is used except that now the operator stands at the left side of the table and a push stick is normally not required.

NOTE

For added table space in front of the blade see "Movement and Position of the Yoke".

RESAWING

Resawing is the cutting of thick boards into thinner ones. It is a ripping operation. See Figure 29. Small boards—up to

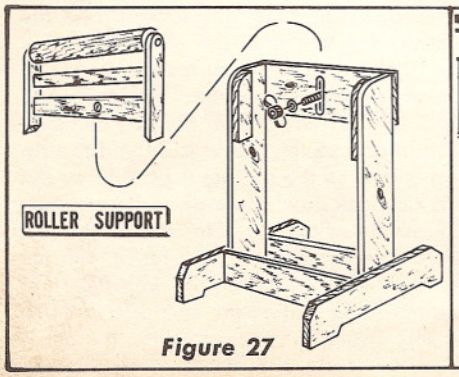


Figure 27

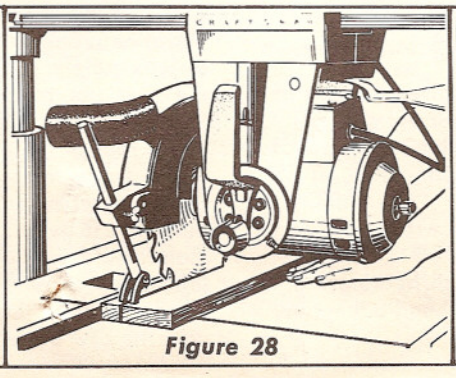
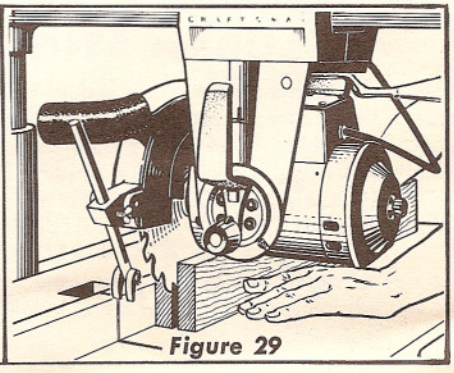


Figure 28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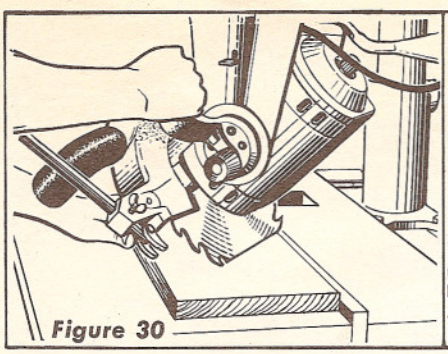
Figure 30

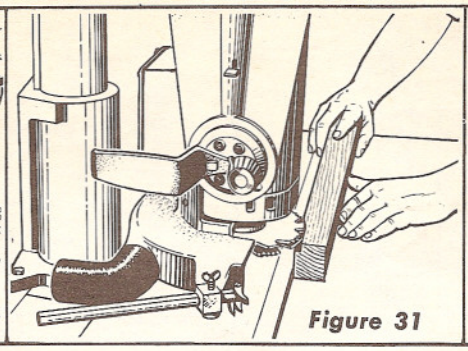
Figure 31

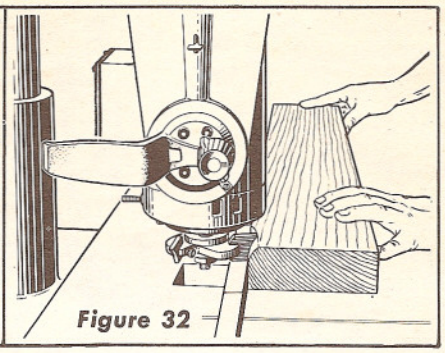
Figure 32

2½" maximum width—can be resawed in one pass; but larger boards up to 5" maximum require two passes, one pass along each edge of the board. When two cuts from opposite edges are required, these should be made to overlap ½" from the approximate center of the board. If the first cut is too deep, the kerf will close and bind the saw on the second cut, with danger of kickback. Also, when the kerf closes, the two sides of the cut are no longer parallel to the saw blade, and the saw will cut into them to spoil their appearance. Keep the same face of the board against the fence when making both cuts.

When cutting boards thicker than 4", a fence should be used which extends 3½" above the table top. When cutting boards thicker than 5", cut both sides and finish the cut with a hand saw.

BEVEL AND MITER CUTS

Bevel cuts can be made from either a cross-cutting or ripping position by tilting the blade to the desired angle. Miter cuts can be made only from a cross-cutting position when the blade and radial arm are at some angle other than 90° to the fence. A bevel miter cut is a cut which is both beveled and mitered. This cut is made with the blade and radial arm set at the desired miter angle to the fence and then the blade only is tilted with respect to the table top to the desired bevel angle. This cut is also referred to as a compound miter. See Figure 30.

USE OF THE DADO HEAD

The dado saw or head, as it is called, is a special set of blades for cutting grooves and dados. Craftsman 8" Kromedge Dado Set can be purchased at any Sears Retail Store or Mail Order House. The head consists of two outside blades 1/8" thick, six 1/8" thick chipper blades and paper washers for 1/16" width adjustments. With these blades, grooves of 1/8", 1/4", and additional widths increased in steps of 1/16" up to a maximum of 13/16" wide can be cut. *Outside blades can be used alone, chippers cannot.*

When using the maximum width of dado of 13/16" on the motor shaft, the outside loose collar (Item 44, Figure 1) must not be used. The width of the dado can be reduced while using the loose collar and two or more passes can be made with the work to obtain the desired width of cut. Whenever two or more chippers are used, stagger the cutting ends as evenly as possible around the circumference. Fractional adjustments in thickness of the head can be made by using paper washers between the outside blades and chippers. Dado head operations are much the same as those with a standard blade—but the dado head takes a bigger bite, so that the work-piece should be held more firmly. When a groove wider than the dado head is needed, make two or more passes. Space cuts so that they overlap a trifle. Dado work is done in the cross-cut position. Ploughing is done in the ripping position. If the rip or plough position is used the saw guard and anti-kickback pawl assembly should be adjusted as described in the paragraph "RIPPING". Rabbeting is done in the vertical position. See Figure 31. When rabbeting, the motor is indexed 90° to the vertical position so that the blades are between the table top and the motor and the yoke is indexed 90° clockwise and locked. The saw is moved back on the radial arm and locked to the arm when the amount of the blade extending forward of the fence is equal to the depth of the rabbet desired. If the depth of the rabbet is large, do not attempt to cut it in one operation. Lower the radial arm until the blades are in a position to cut the desired width of rabbet in the edge of the board. The bottom of the saw guard should be parallel to the fence and the discharge elbow directed to the rear of the saw.

MOLDING OR SHAPING

This work is done using the Craftsman Molding Cutter Head and a set of cutters depending on the type of molding cut desired. This work is done with the saw in the same position as that described for rabbeting. See Figure 32. Since the position of the cutters with respect to the fence and the table top can be adjusted any or all of the cutter shapes can be used.

ROUTING AND DOVETAILING

Routing and dovetailing are done with the motor indexed and locked 90° from the horizontal except that this time the externally threaded stub end opposite the normal blade end is between the motor and the table top. The following chucks will mate with this external ½-20 thread: (See Figure 33).

0" to 1/4" Key Chuck
5/64" to 1/2" Key Chuck

The following routers and dovetails are recommended:

1/8" router
1/4" router
3/8" router
1/2" router
5/8" router
3/8" dovetail
1/2" dovetail

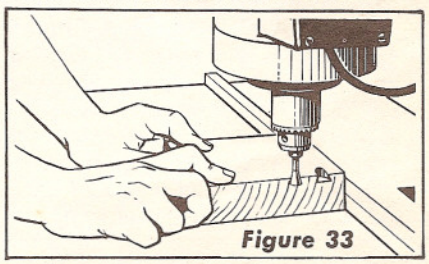
Figure 33

Routing may be done by either moving the work with a stationary router or by clamping the work to the table and moving the router. *Always approach the router bit from the left hand side of the saw.*

BORING

Your saw can also be converted to a horizontal drill for boring by using one of the recommended chucks and the proper drill. For drilling holes on an angle the radial arm should be positioned to the desired angle while the work is parallel to the fence. See Figure 34.

SANDING

Using the 10" sanding disc mounted on the saw end of the motor, you can convert your saw into a sander which can be operated in any position. The loose collars should be used on both sides of the sanding disc.

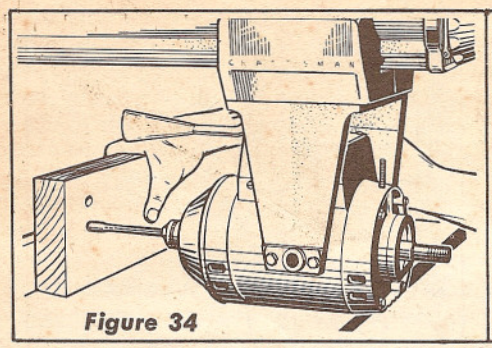

Figure 34

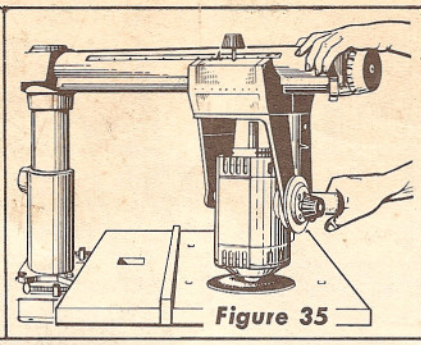

Figure 35

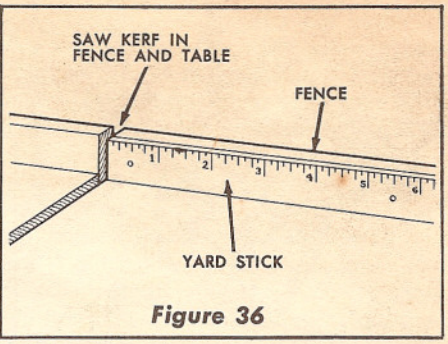

Figure 36

STABILIZING WASHERS FOR THIN BLADES

Stabilizing washers should be used with blades for improved appearance of the finish cuts.

BRAKE

The motor of this saw is equipped with a built-in electro-mechanical brake to eliminate a long coast time after the saw is turned off. When the motor is started, the brake shoe is instantly pulled away from the brake lining so that the motor does not start under load. When the motor is turned off the braking action takes place automatically. This brake is designed to stop a free running saw blade in 5 to 10 seconds. DO NOT attempt to alter either the brake disc or the lining to get a faster stopping time. Stopping the blade too suddenly could possibly unscrew the shaft nut.

HELPFUL HINTS

1. The life of the laminated saw table can be greatly lengthened if a ¼" piece of plywood is tacked to the table top after leveling. Then all cutting can be done in the added piece of plywood instead of the laminated table.
2. There is a possibility that during or after shipment, the wooden front table; spacer board, or rear table might become slightly warped. Lay a straight edge across the surface of the table and check for gaps or high spots on the table. Any portions of the table which are not flat should be planed and sanded until flat. Sanding can be done by using one of the two key chucks referred to under "Routing" and a Craftsman moulded rubber 7" sanding disc.
3. When sanding the table top (See Figure 35) or routing with the work stationary, the arm lock pin can be prevented from automatically indexing at 0° and 45° by rotating the arm latch handle about 6 turns counter-clockwise from the locked position.
4. A scale may be attached to the fence to aid the operator when measuring lengths during cross-cut operations. This can be accomplished by tacking a yard stick to the fence as shown. See Figure 36.
5. In the event that the fence is warped and cannot be straightened by tightening the table clamps proceed as follows: Remove the fence and replace with a temporary fence made from a straight piece of scrap lumber. Proceed to cut slots in the original fence where the gap between the fence and front table was determined to be the greatest. See Figure 37 for slotting.
   Replace the fence, after slotting, behind the front table with the slots toward the rear and tighten the table clamps.
6. There are three positions in which the fence can be located. See Figure 38.
   1. Normal position.
   2. Position used for maximum cross-cut on 1" material and for greater bevel and miter capacity.

   CAUTION

   Rip scales cannot be used in this position.
   3. Position used for maximum out-rip capacity.
7. Keep all cutting tools such as saw blades, drills, molding cutters, dados, etc. sharp and do not force feed the work to the point where the motor speed is drastically reduced. This will minimize effort, give better cuts, and better resist overheating and possible burn out caused by the abuse of overload.
8. When using planer, molding, or dado blades, repeated light cuts will give the best results. Deep cuts reduce the quality of the finish.
9. An auxiliary table top for molding or shaping can be constructed similar to Figure 39. Note the shape of the back guide fence against which your work piece is moved. A cut-out 5" wide should be made at the center of this guide fence to give adequate clearance for the molding head and cutters. Also a wider clearance marked "A" should be made to allow for the radial saw motor. Be sure the front edge of the auxiliary table is parallel with the surface of the guide fence. With the auxiliary table top thus completed it is ready for use by merely clamping it into position with "C" clamps.

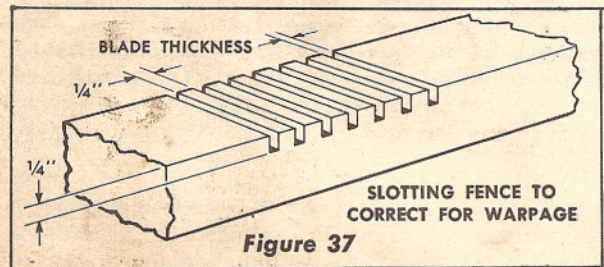

Figure 37

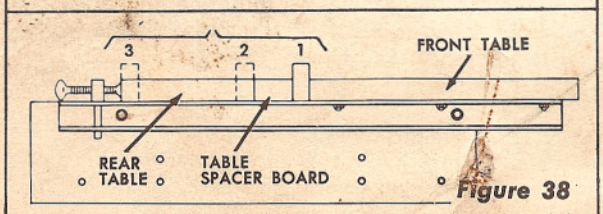

Figure 38

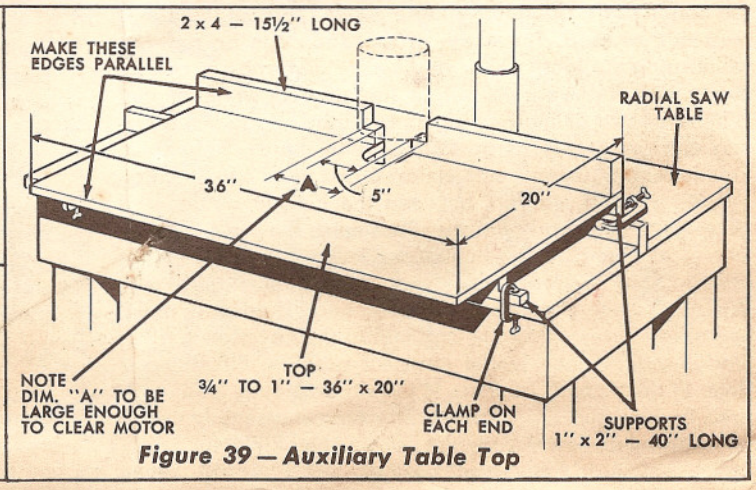

Figure 39 — Auxiliary Table Top